

ABSTRACT OF THE DISCLOSURE

A phase demodulator is used for measuring a phase difference between a phase-modulated test signal and a phase-modulated reference signal having fixed carrier frequencies. The phase demodulator includes an amplitude control device for adjusting amplitudes of the test and reference signals. A differential amplifier receives amplitude-adjusted test and reference signals from the amplitude control device, obtains an intensity difference between the amplitude-adjusted test and reference signals, and amplifies the intensity difference to generate an amplitude-modulated output. An amplitude demodulator demodulates the amplitude-modulated output to obtain an output that is related to the phase difference.